

AMENDMENTS TO THE CLAIMS

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. – 41. (Canceled)

42. (Currently Amended) An isolated recombinant human adenine nucleotide translocator (ANT) polypeptide comprising an amino acid sequence that is at least 95 percent identical to a human ANT3 sequence as set forth in SEQ ID NO:33 and that localizes to a mitochondrial membrane, that is capable of binding an ANT ligand and that is produced by a method comprising culturing a host cell comprising a recombinant expression construct comprising at least one regulated promoter operably linked to a nucleic acid encoding the ~~adenine nucleotide translocator~~ ANT polypeptide.

43. – 45. (Canceled)

46. (Currently Amended) The isolated polypeptide of claim 42 wherein the host cell lacks an endogenous human ANT1 ~~adenine nucleotide translocator~~ polypeptide as set forth in SEQ ID NO:31 and wherein the host cell lacks an endogenous human ANT2 ~~adenine nucleotide translocator~~ polypeptide as set forth in SEQ ID NO:32.

47. (Currently Amended) An isolated recombinant human adenine nucleotide translocator fusion protein comprising an adenine nucleotide translocator (ANT) polypeptide fused to at least one additional polypeptide sequence, wherein the ANT polypeptide comprises an amino acid sequence that is at least 95 percent identical to a human ANT3 sequence as set forth in SEQ ID NO:33 and wherein the fusion protein localizes to a mitochondrial membrane and is capable of binding an ANT ligand.

48. (Original) The fusion protein of claim 47 wherein said one additional polypeptide sequence is an enzyme sequence or a variant or fragment thereof.

49. – 50. (Canceled)

51. (Currently Amended) An isolated human adenine nucleotide translocator fusion protein comprising an adenine nucleotide translocator (ANT) polypeptide fused to at least one additional polypeptide sequence cleavable by a protease that separates the adenine translocator polypeptide from the remainder of the fusion protein, said adenine nucleotide translocator polypeptide being capable of localizing to a mitochondrial membrane and capable of binding an ANT ligand, wherein the ANT polypeptide comprises an amino acid sequence that is at least 95 percent identical to a human ANT3 sequence as set forth in SEQ ID NO:33.

52. – 56. (Canceled)

57. (Previously Presented) The fusion protein of claim 47 wherein the additional polypeptide sequence is a polypeptide having affinity for a ligand.

58. – 112. (Canceled)